Notice of Allowability	Application No. 09/152,593	Applicant(s) HASEGAWA ET AL.	
	Examiner Alan Diamond	Art Unit 1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the after-final amendment filed February 22, 2005*.

2. ☒ The allowed claim(s) is/are *1-8*.

3. ☐ The drawings filed on _____ are accepted by the Examiner.

4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☒ Certified copies of the priority documents have been received in Application No. *07/634,054* .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☒ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *04202005* .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

In The Specification

Please delete all of the continuity data at the top of page 1, and insert in its place --This application is a continuation-in-part of Ser. No. 08/539,001 filed October 4, 1995 now U.S. Patent 6,582,621, which is a continuation of Ser. No. 08/193,281 filed February 8, 1994 now abandoned, which is a continuation-in-part of Ser. No. 08/019,177 filed January 28, 1993 now abandoned, which is a continuation of Ser. No. 07/634,054 filed December 26, 1990 now abandoned.--

2. The following is an examiner's statement of reasons for allowance: The instant claims are fully supported by each of parent applications 08/539,001, 08/193,281, 08/019,177, and 07/634,054, as well as the certified English translation of Japanese foreign priority document 1-341244, which has a filing date of December 28, 1989. Accordingly, the instant claims have a foreign priority date of December 28, 1989. Parent Serial No. 07/634,054 has a U.S. filing date of December 26, 1990. Said December 28, 1989 foreign priority date antedates Jolley (WO 90/12849) which has a publication date of November 1, 1999, and also antedates Zehler et al (U.S. 5,021,179) which has a filing date of July 12, 1990. Kamakura et al (EP 448402), which issued

September 25, 1991 is antedated by both the December 28, 1989 and December 26, 1990 dates. Also antedated are Ishida et al (U.S. Patent 5,447,647) and Kamakura et al (U.S. Patent 5,620,950). Accordingly, neither Jolley, Zehler et al, Kamakura et al '402, Ishida et al, nor Kamakura et al '950 can be used as a reference against the instant claims.

Furthermore, it should be noted that out of the many examples in Jolley, none sets forth an ester within the scope of the ester in the instant claims. Jolley's Examples 8-12 use pentaerythritol or dipentaerythritol to form the ester. However, acetic acid is used to complete the esterification or to form the ester. Acetic acid is outside of the claimed carbon atom range for the instant R^1-R^4 groups. Note that the instant claims are "consist of" claims and thus, exclude the acetic acid esters formed in said Examples 8-12. Examples 13 and 14 of Jolley represent only partial, not complete esterification of di- and tri-pentaerythritol, due to the number of moles of the reactants. Note page 16, lines 24-29, of Jolley where incomplete esterification is taught. The instant esters are completely esterified. Jolley's examples lead a skilled artisan away from the esters in the instant claims. It should further be noted that Jolley is silent concerning kinematic viscosity, whereas the instant claims now require that the base oil has a kinematic viscosity of 2 to 150 cSt at 100°C. Accordingly, it would not have been obvious to a skilled artisan to have prepared the instant esters from Jolley's disclosure, and then to have added the instant epoxy compound. Note that Kohashi et al (JP 62-292895) and Schmidt et al (DE 133966), which teach the use of an epoxy compound in a fluid composition for use in refrigerators, further lead the skilled artisan away from the

instantly claimed invention because Kohashi et al and Schmidt et al use chlorine-containing refrigerants rather than chlorine-free fluorocarbon refrigerants, as here claimed.

The refrigerant oil in Williamitis (U.S. Patent 2,807,155) can be esters of, among others, dipentaerythritol or tripentaerythritol (see col. 2, line 57 through col. 3, line 20). However, Williamitis lacks the instant 0.1 to 5% by weight of epoxy compound that is selected from a particular group of epoxy compounds, and that is recited in each of the instant independent claims. Furthermore, the specific refrigerants disclosed by Williamitis are chlorine-containing, whereas the refrigerant in the instant claims is chlorine-free (see col. 2, lines 23-29). Williamitis does teach that fluoro halo derivatives disclosed in Midgley, Jr (U.S. Re. 19,265) can be used as refrigerants (see col. 2, lines 23-29, of Williamitis), although Freon 22, which is chlorine-containing, is preferred by Williamitis. It is true that Midgley, Jr does disclose some chlorine-free refrigerants (see page 1, line 105 through page 2, line 26 of Midgley, Jr). However, as noted above, Kohashi et al and Schmidt et al, which teach said epoxy compound for fluid compositions in refrigerators, use chlorine-containing refrigerants. It should be noted that what works with chlorine-containing refrigerants is not necessarily suitable with chlorine-free refrigerants. Indeed, Schmidt et al teaches that the addition of additives to refrigerator oils is generally avoided by the industry because every material that is added provides a possibility for further chemical reactions in the refrigeration circulation (see page 2 of the English translation of Schmidt et al, which is already of record and scanned in the instant IFW filed). Furthermore, upon careful reconsideration of Kohashi

et al, it is noted that corrosion Kohashi et al is trying to prevent is due to the instability of the ester oils with "flon", e.g., flon-22, (chlorine-containing refrigerant). Kohashi et al never considers chlorine-free refrigerant. Accordingly, it is the Examiner's position that the selection of the appropriate ester oils from Williamitis, the selection of a chlorine-free refrigerant from Midgley, Jr, and then the selection of an additive from Kohashi et al or Schmidt et al would have been improper hindsight. It should even further be noted that the instant claims have been amended so as to require that the base oil has a kinematic viscosity of 2 to 150 cSt at 100°C. Williamitis teaches kinematic viscosity at 100°F (i.e., 38°C) of 50 to 2000 SUS, but does is silent concerning kinematic viscosity at 100°C. According to the instant specification (see the paragraph bridging pages 22 and 23), the kinematic viscosity of the refrigerator oils should be not less than 2 cSt to keep the sealability of the compressor, and should be not more than 100 cSt in view of their fluidity at a low temperature and the efficiency of heat exchange in the evaporator.

The following references are hereby made of record: US 5,279,752, US 5,391,311, US 5,464,550, US 5,512,198, US 5,746,933, US 6,207,071, US 6,251,300, US 6,410,492, US 6,828,286, EP 480479 A2, and EP 514988 A2.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Oath/Declaration

3. The oath or declaration is defective because: it refers to the filing date of Japanese foreign priority application 2-121133 as May 15, 1990. However, the correct filing date is May 14, 1990.

4. Applicant is now required to submit a substitute declaration or oath to correct the deficiencies set forth in the immediately preceding paragraph. The substitute oath or declaration must be filed within the THREE MONTH shortened statutory period set for reply in the "Notice of Allowability" (PTO-37). Extensions of time may NOT be obtained under the provisions of 37 CFR 1.136. Failure to timely file the substitute declaration (or oath) will result in **ABANDONMENT** of the application. The transmittal letter accompanying the declaration (or oath) should indicate the date of the "Notice of Allowance" (PTOL-85) and the application number in the upper right hand corner.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan Diamond whose telephone number is 571-272-1338. The examiner can normally be reached on Monday through Friday, 5:30 a.m. to 2:00 p.m. ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on 571-272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Alan Diamond
Primary Examiner
Art Unit 1753

Alan Diamond
April 20, 2005